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PATENT DEPARTMENT
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EXAMINER	
PHILPOTT, JUSTIN M	
ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary	Application No. 10/644,700	Applicant(s) LOVELL ET AL.	
	Examiner Justin M. Philpott	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 19 August 2003.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 19 August 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 9 are objected to because of the following informalities: "the selected node" (claim 1, line 10 and line 11) should be changed to "the at least one selected node", based upon the language previously recited at lines 7-8; and "the packet" (claim 9, line 4) should be changed to "a packet". Additionally, it is unclear if "a packet having a payload including the data block" at lines 12-13 is referring to the same packet as in lines 4-5; clarification is required. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,864,559 to Perlman in view of U.S. Patent No. 5,477,536 to Picard.

Regarding claim 1, Perlman teaches a method for transmitting a data block over a network (col. 6, lines 48-52) from a first sending node (e.g., node 124, see FIG. 1) to a first set of recipient nodes (nodes 102, 105-107, 122 and 123 located in area 131), comprising: in the first sending node (e.g., node 124) dividing the first set of recipient nodes (e.g., nodes in area 131) into a subset of selected nodes (level 2 nodes, 122 and 123 in area 131) (e.g., see col. 7, line 65 –

col. 9, line 20 regarding node processes are performed by each intermediate system node, including arranging the nodes by a spanning tree in process 360; and see col. 5, line 62 – col. 6, line 29 regarding communication nodes being either intermediate or end system nodes and thereafter being respectively referred to as "nodes" or "end nodes", whereby level 2 node 124 is implicitly an intermediate node) that are selected according to scoring criteria associated with each recipient node (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through particular links or nodes) and a subset of unselected nodes (implicitly, level 1 nodes 102 and 105-107, which are the remaining nodes in area 131 after the selected level 2 nodes 122 and 123); assigning at least one of the unselected nodes (e.g., level 1 nodes in area 131) to at least one selected node (e.g., indicated by pathways connecting level 1 nodes to level 2 nodes in area 131; e.g., unselected node 105 is assigned to selected node 122 as shown in FIG. 1) according to scoring criteria associated with the respective selected nodes (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through the particular links or nodes); and a list dynamically associating the at least one selected node (e.g., level 2 nodes in area 131) with the unselected nodes (e.g., level 1 nodes in area 131) for the transmission of the data block to the unselected nodes (e.g., see col. 6, lines 50-52 regarding transmission of data packets). However, Perlman may not specifically disclose transmitting a packet comprising both a data block and a list of assigned nodes.

Picard, like Perlman, also teaches a method of transmitting a date block from a sending node to recipient nodes using a novel routing technique (e.g., see col. 1, line 5 – col. 2, line 42), and further, specifically teaches the transmitting includes transmitting a packet having both a

data block (e.g., see "DATA" block in FIG. 5) and a routing list (e.g., see "RL" in FIG. 5, and also see col. 2, lines 7-8 and col. 5, lines 4-27 regarding routing list / RL field). Additionally, the particular teachings of Picard provide each intermediate node with the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions, resulting in improved adaptability of system conditions (e.g., see col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing method teachings of Picard to the routing method of Perlman in order to provide improved adaptability of system conditions by way of each intermediate node having the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions (e.g., see Picard at col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39).

Regarding claim 2, Perlman teaches each unselected node (e.g., level 1 nodes in area 131) is assigned to at least one selected node (e.g., level 2 nodes 122 and 123) (see FIG. 1).

Regarding claim 3, Perlman teaches the scoring criteria for at least one recipient node includes the effective bandwidth of that node (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through a particular link or node, wherein volume of traffic reflects the effective bandwidth).

Regarding claims 4 and 5, Perlman in view of Picardo teaches the method discussed above regarding claim 1, and while Perlman in view of Picardo may not specifically disclose the scoring criteria includes the latency or amount of time between receiving a packet from the sending node at the recipient node, Perlman teaches the spanning tree selects the least cost pathway (e.g., see col. 3, lines 1-27), and Examiner takes official notice that it is well known in

the art of routing that the latency or amount of time between receiving a packet from the sending node at the recipient node between sending and receiving nodes is a well known significant factor affecting cost. Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the art to factor latency or the amount of time between receiving a packet from the sending node at the recipient node into the cost when determining the spanning tree in the routing method of Perlman since it is well known in the art of routing that the latency between sending and receiving nodes is a factor affecting cost.

Regarding claims 6 and 7, Perlman in view of Picardo teaches the method discussed above regarding claim 1, and while Perlman in view of Picardo may not specifically disclose the data block contains audio or video data, the data block in Picardo is contained within a packet (e.g., see Picardo at col. 5, lines 4-27) and Perlman also teaches transmitting data packets (e.g., see Perlman at col. 6, lines 50-52 regarding "data packets"). Furthermore, Examiner takes official notice that it is well known in the art of packet communications that data in packets may comprise audio or video data. Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the art to transmit audio or video data in the data block of the packets transmitted in Picardo since it is well known in the art of packet communications that data in packets may comprise audio or video data.

Regarding claim 8, Perlman teaches each unselected node (e.g., level 1 node) may be assigned to only one selected node (e.g., level 2 node) (e.g., see area 130 wherein each level 1 node is coupled only to a single level 2 node).

Regarding claim 9, Perlman teaches a method for transmitting a data block over a network (col. 6, lines 48-52) from a first sending node (e.g., node 124, see FIG. 1) to a first set of

recipient nodes (nodes 102, 105-107, 122 and 123 located in area 131), comprising: in at least one selected node (e.g., level 2 node) in the first set of recipient nodes: dividing a list of assigned nodes into a subset of selected assigned nodes (e.g., level 2 nodes having identified level 1 node neighbors), selected according to scoring criteria associated with each assigned node (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through particular links or nodes), and a subset of unselected assigned nodes (e.g., level 1 nodes having identified node neighbors) (e.g., see col. 7, line 65 – col. 9, line 20 regarding node processes are performed by each intermediate system node, including arranging the nodes by a spanning tree in process 360; and see col. 5, line 62 – col. 6, line 29 regarding communication nodes being either intermediate or end system nodes and thereafter being respectively referred to as "nodes" or "end nodes", whereby a level 2 node is implicitly an intermediate node); and reassigning at least one of the unselected assigned nodes (e.g., level 1 nodes having identified node neighbors) to at least one selected assigned node (e.g., level 2 node) (e.g., see col. 8, lines 25-56 regarding deleting and adding neighbors) according to scoring criteria associated with the respective selected assigned nodes (e.g., according to the spanning tree, see col. 3, lines 1-27 and col. 8, line 25 – col. 9, line 20). However, Perlman may not specifically disclose receiving/transmitting a packet comprising both a data block and a list of assigned/reassigned nodes.

Picard, like Perlman, also teaches a method of transmitting a date block from a sending node to recipient nodes using a novel routing technique (e.g., see col. 1, line 5 – col. 2, line 42), and further, specifically teaches the receiving/transmitting includes receiving/transmitting a packet having both a data block (e.g., see "DATA" block in FIG. 5) and a routing list of

assigned/reassigned nodes (e.g., see "RL" in FIG. 5, and also see col. 2, lines 7-8 and col. 5, lines 4-27 regarding routing list / RL field). Additionally, the particular teachings of Picard provide each intermediate node with the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions, resulting in improved adaptability of system conditions (e.g., see col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing method teachings of Picard to the routing method of Perlman in order to provide improved adaptability of system conditions by way of each intermediate node having the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions (e.g., see Picard at col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39).

Regarding claim 10, Perlman teaches each unselected node (e.g., level 1 nodes in area 131) is reassigned to at least one selected node (e.g., level 2 nodes 122 and 123) (see FIG. 1, and also see col. 8, lines 25-56 regarding deleting and adding neighbors).

Regarding claim 11, Perlman teaches the at least one selected node (e.g., level 2 node in area 131) may comprise at least two selected nodes (e.g., level 2 nodes 122 and 123).

Regarding claim 12, Picard teaches in a plurality of recipient nodes, generating a user discernable output reflecting information in the data block (e.g., see col. 7, lines 1-11 regarding the status signal indicating whether the packet is correct). As discussed above, the particular teachings of Picard provide each intermediate node with the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions, resulting in improved adaptability of system conditions (e.g., see col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39). Thus, at the time of the invention it would have been obvious to one of ordinary

skill in the art to apply the routing method teachings of Picard to the routing method of Perlman in order to provide improved adaptability of system conditions by way of each intermediate node having the ability to send notifications to the originator node upon congestion, port outages, or other abnormal conditions (e.g., see Picard at col. 1, line 30 – col. 2, line 42, and col. 3, lines 6-39).

Regarding claim 13, Perlman teaches the scoring criteria for at least one of the nodes on the list of assigned nodes includes the effective bandwidth of that node (e.g., see col. 3, lines 1-27 regarding the spanning tree selecting the least cost pathway wherein the cost is determined by the volume of traffic through a particular link or node, wherein volume of traffic reflects the effective bandwidth).

Regarding claims 14 and 15, Perlman in view of Picardo teaches the method discussed above regarding claim 9, and while Perlman in view of Picardo may not specifically disclose the scoring criteria includes the latency or amount of time between receiving a packet from the sending node at the recipient node, Perlman teaches the spanning tree selects the least cost pathway (e.g., see col. 3, lines 1-27), and Examiner takes official notice that it is well known in the art of routing that the latency or amount of time between receiving a packet from the sending node at the recipient node between sending and receiving nodes is a well known significant factor affecting cost. Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the art to factor latency or the amount of time between receiving a packet from the sending node at the recipient node into the cost when determining the spanning tree in the routing method of Perlman since it is well known in the art of routing that the latency between sending and receiving nodes is a factor affecting cost.

Regarding claims 16 and 17, Perlman in view of Picardo teaches the method discussed above regarding claim 9, and while Perlman in view of Picardo may not specifically disclose the data block contains audio or video data, the data block in Picardo is contained within a packet (e.g., see Picardo at col. 5, lines 4-27) and Perlman also teaches transmitting data packets (e.g., see Perlman at col. 6, lines 50-52 regarding "data packets"). Furthermore, Examiner takes official notice that it is well known in the art of packet communications that data in packets may comprise audio or video data. Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the art to transmit audio or video data in the data block of the packets transmitted in Picardo since it is well known in the art of packet communications that data in packets may comprise audio or video data.

Regarding claim 18, Perlman teaches each unselected assigned node (e.g., level 1 node) may be reassigned to only one selected node (e.g., level 2 node) (e.g., see area 130 wherein each level 1 node is coupled only to a single level 2 node; see also col. 8, lines 25-56 regarding deleting and adding neighbors).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,633,570 [hereafter, the patent]. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application have been written to be broader versions of the issued patent claims. Specifically, all of the limitations of both independent claims 1 and 9 of the instant application are already recited in their entirety within claim 1 of the patent. Additionally, claims 2-8 and 10-18 of the instant application depend upon claims 1 and 9, respectively, and are therefore rejected for the same reasons discussed above regarding claims 1 and 9.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Nos. 5,574,860 to Perlman et al. and 5,787,083 to Iwamoto et al. each disclose methods for routing packets with selected and unselected nodes.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

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4/17/08